REMARKS

Reconsideration is respectfully requested in light of the foregoing Amendment and the following remarks.

Claims 1-6 and 15-20 are currently pending in the application, with claims 1 and 15 being the independent claims. Claims 1 and 15 are currently amended. Claims 7-14 were previously withdrawn from consideration. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

The Examiner presents an obviousness rejection in the Office Action, Paper No. 10, mailed on May 18, 2004:

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taga et al. (US Pat No. 6,181,449) (hereinafter "Taga") in view of Jinguji et al. (US Pat No. 5,572,611) (hereinafter "Jinguji"). See Office Action at ¶ 3.

Applicant respectfully submits that this rejection has been rendered moot or is accommodated by the above-entered amendments and/or the following remarks.

With respect to the amendments to the independent claims, the recitation of "control parts provided between respective ones of the directional couplers" is disclosed, for example, in Fig. 2, elements 9a to 9e. Furthermore, the recitation of "the control parts provided in respective ones of the directional couplers" is disclosed, for example, by element 13 of Fig. 2 when those denoted, for example, by elements 8a - 8f in Fig. 2 are replaced by the optical couplers illustrated in Fig. 5. Additionally, the recitation of "semipermanent phase shift is achieved by applying

local heating and quenching for a photoelastic effect to said control parts of waveguide refractive index" is disclosed, for example, in the specification on page 13, lines 13 to 20; and on page 16, lines 1 to 7.

The features added by the above amendments are neither taught nor suggested by either Taga or Jinguji, alone or in combination. Specifically, neither Taga nor Jinguji teach or suggest, alone or in combination, the recitation of "control parts of waveguide refractive index for effecting phase control of said waveguides are provided between respective ones of said directional couplers, or between respective ones of said directional couplers and in respective ones of said directional couplers." Furthermore, neither Taga nor Jinguji teach or suggest, alone or in combination, the recitation that "semipermanent phase shift is achieved by applying local heating and quenching for a photoelastic effect to said control parts of waveguide refractive index."

For at least the above reasons, Applicant respectfully submits that independent claims 1, and 15 are clearly patentable over the applied reference. The claims depending therefrom are believed to be allowable for at least the reasons described above with respect to the independent claims, and further in view of their own respective features. Withdrawal of these rejections is respectfully requested.

Applicants also respectfully request, in the event that any of the considered claims are deemed allowable, that the withdrawn claims 7-14 be appropriately reconsidered and allowed to the extent provided by the above-sought amendments.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all currently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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